IDAHO DISEASE BULLETIN

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Much ado about Monkeypox

Monkeypox, a relative of smallpox, cow pox, and vaccinia, made its way into the United States for the first time in 2003. In a world sensitized by acts of bioterrorism and the spectre of smallpox, this unusual rash illness caused a dramatic nationwide public health surveillance and response effort. This viral illness is zoonotic, first described in monkeys, but also found in other mammals including squirrels, rats, and other rodents.

Human monkeypox was first described in 1970. In humans, the signs and symptoms of monkeypox are like those of smallpox, but usually they are milder. The virus is spread through respiratory droplets between people or direct contact with the rash, contaminated surfaces, or ill animals. This illness typically circulates only in central and western Africa.

Monkeypox in the United States: The virus apparently was introduced into the United States in April, 2003 by the most unlikely of pathways; infected giant Gambian pouched rats (see photo). These fascinating creatures were imported from Africa along with a number of other exotic small creatures that then found their way into the exotic pet trade. Infected animals were caged next to other less exotic animals such as prairie dogs. The rats apparently passed the virus to the prairie dogs. The infected prairie dogs, which were extremely susceptible to infection, were sold during the incubation period to new homes in at least 14 states. The first human illness was documented May 15th, after exposure to an ill prairie dog.

As of July 18, 2003, a total of 72 cases of human monkeypox have been reported to CDC from Wisconsin, Indiana, Illinois, Missouri, Kansas, and Ohio; these include 37 (51%) cases laboratory-confirmed at CDC and 35 (48.6%) suspect and probable cases under investigation by state and local health departments. The last known onset date was June 20, 2003. All 37 laboratory-confirmed patients were exposed to infected prairie dogs.

There is a fear that infected animals could be released into the wild, creating a reservoir in the U. S. On June 11, 2003 CDC and FDA issued a joint order banning any inter- and intrastate transport, sale, offering for sale or distribution, including release into the environment of any prairie dog, tree squirrel, rope squirrel, dormouse, Gambian giant pouched rat, brush-tailed porcupine, or striped mouse. People who violate the joint order may be subject to criminal and/or civil penalties.

Giant Gambian pouched rat

Surveillance in Idaho: We are not aware of any infected animals or human cases in Idaho. Efforts were carried out by many agencies to assure that healthcare providers, veterinarians, and petshop managers were aware of monkeypox. In addition, FDA provided education to zoo directors regarding the ban on the movement of exotic species between zoos.

More inside

Laboratory testing is available at the Idaho State Bureau of Laboratories, should the need arise. Testing methods are similar to those for suspected cases of smallpox; skin lesions are collected and then tested by PCR.

CDC has an extensive website describing monkeypox and risk factors for illness. The website also has information on the use of the smallpox vaccine in individuals investigating monkeypox outbreaks and involved in caring for infected individuals or animals confirmed with monkeypox: http://www.cdc.gov/ncidod/monkeypox/factsheet.htm

Although monkeypox surveillance and control efforts appear to have been successful in eliminating the onset of new cases of monkeypox infection in the U.S., this disease is a stark reminder that exotic pathogens may enter the United States at any time.

Detection of Non-O157 Shiga-toxin producing *E. coli* is a tricky proposition

Shiga-toxin producing *E. coli* (STEC) infections may lead to complications including thrombocytopenic purpura, hemolytic uremic syndrome, and severe hemorraghic colitis. Many illnesses are documented due to the O157:H7 STEC strain, but many illnesses due to the non-O157 STEC strains may be missed due to unique testing requirements for these pathogens. STEC strains have the potential to cause infections or outbreaks of disease; therefore, accurate laboratory diagnosis is important to case and outbreak detection and control. Non-O157 STEC strains are not detected by standard sorbital MacConkey (SMAC) screening culture methods routinely used to pick up the O157:H7 STEC strain.

Relying on SMAC cultures alone to detect STEC strains will reduce the chance of detecting the offending pathogen. Other options for detection exist and are employed by the Idaho state public health laboratory and several hospital laboratories around the state. Laboratories are just beginning to adopt these other detection methods. These techniques include toxin detection using an ELISA (enzyme linked immunoadsorbant assay). A positive test, in the absence of a positive SMAC culture plate, suggests the presence of one of the non-O157 STEC strains. These cultures may then be further probed at the state laboratory by the Dynabead method. Dynabeads are small beads coated with a strain-specific antibody that selectively attaches to a unique strain of non-O157 STEC, enhancing detection. Strains detected in this manner include O26, O103, O111, and O145. Once strains are identified, in addition to providing a diagnosis, it becomes possible to link patients potentially associated with a common exposure during an outbreak.

The Centers for Disease Control and Prevention recommends that HUS cases be tested for STEC by toxin screening methods to enhance the ability to detect STEC. If testing diarrhea for enteric pathogens, STEC testing should be considered. You may consider querying your laboratory about available testing options.

Reportable Disease Notification in the Era of HIPAA

The Health Insurance Portability and Accountability Act of 1996 (HIPAA) has had a big impact on the healthcare world. It is challenging to correctly interpret and implement HIPAA in a busy medical practice. Some in the healthcare community may be tempted to default to a position where medical information on every patient is uniformly withheld from public health workers. However, this position is not a solution since reportable diseases and conditions still need to be reported!

In an attempt to clarify this issue a recent Morbidity and Mortality Weekly Report (HIPAA Privacy Rule and Public Health, MMWR, Vol 52, April 11, 2003) described the acceptable data that may be shared between the healthcare provider and the public health official. The MMWR states that:

> "Public health officials are authorized to collect or receive protected health information for the purposes of preventing or controlling disease, injury or disability including, but not limited to:
>
> - Reporting of disease, injury, and vital events (e.g., birth or death); and,
> - Conducting public health surveillance, investigations, and interventions."

The MMWR provides a list of authorized situations where protected health information may be disclosed without individual patient authorization. Not only does HIPAA apply to those confirmed or suspected of having a

reportable disease or condition but also to those who may have been exposed to a communicable disease or may be at risk for contracting or spreading a disease or condition but does not, at the time of contact, display any signs or symptoms. This would only be appropriate when public health officials are legally authorized, according to the Idaho rules and regulations governing reportable diseases, to notify the person as necessary to conduct a public health intervention or investigation.

The State Law regarding reportable diseases and conditions in Idaho (IDAPA 16.02.10), is found at: http://www2.state.id.us/adm/adminrules/rules/idapa16/0210.pdf.

The HIPAA MMWR can be accessed through the following site:
http://www.cdc.gov/mmwr/preview/mmwrhtml/su5201a1.htm

WNV and SLE testing Available in Idaho

West Nile virus (WNV) testing is available at the Idaho State Bureau of Laboratories. CSF and/or serum will be accepted from individuals with aseptic meningitis, aseptic encephalitis, or acute flaccid paralysis. Information requested will include but not be limited to onset date, date of specimen collection, and travel history. Acute and convalescent serum will be examined for both IgM and IgG virus–specific antibodies. Acute samples will be tested as they are received. There is no need to wait to submit paired sera together. Acute samples drawn prior to 10 days after onset of illness may initially be negative for WNV antibodies; therefore if the acute sample is negative and you still suspect an arboviral infection a convalescent sample should be drawn two to three weeks after the acute sample. Initially, positive samples will be confirmed by the Centers for Disease Control and Prevention. Samples will also be tested for St. Louis encephalitis virus (SLE), a closely related endemic virus with similar transmission and clinical characteristics. Currently these tests are run free of charge. Should you have any questions regarding sample testing, contact the state laboratory at 208-334-2235 x 228 or your local district health department.

IDAHO DEPARTMENT OF HEALTH & WELFARE

Rabies Postexposure Prophylaxis

Every year bats and other animals tested at the Idaho Department of Health and Welfare Bureau of Laboratories are found to be harboring the rabies virus. Rabid animals are typically found throughout the state. Bats are the primary reservoir of rabies in Idaho and account for the majority of positive submissions, but occasionally the bat strain of rabies will be detected in other species. Therefore, the bite from any mammal is considered a potential rabies exposure until investigation determines that rabies is unlikely, or laboratory testing proves negative. The rabies postexposure prophylaxis (rPEP) protocol calls for rabies immune globulin and the rabies vaccine. A description of the protocol for rPEP may be found in the January 8, 1999, Vol 48, MMWR Recommendation and Report: "Human Rabies Prevention, United States, 1999" or found on-line at:
http://www.cdc.gov/ncidod/dvrd/rabies/Professional/publications/ACIP/ACIP99.pdf
The immune globulin and the vaccine may be found at most major medical center pharmacies. A list of facilities which generally stock these items in Idaho is shown below. Other hospital pharmacies may also stock these items. These products are not maintained by the health districts or state health department.

Rabies Vaccine and Immune Globulin Availability in Idaho
Updated: 2/28/2003

Medical Center Pharmacy	City	Vaccine	IG	Pharmacy Phone #
Portneuf RMC	Pocatello	Y	Y	239-1382
EIRMC	Idaho Falls	Y	Y	535-4797
Kootenai RMC	CDA	Y	Y	666-3037
MVRMC	Twin Falls	Y	Y	737-2390
Pocatello RMC	Pocatello	Y	Y	239-2686
Sacred Heart MC	Spokane	Y	Y	509-474-3242
St Al's RMC	Boise	Y	Y	367-2166
St Luke's RMC	Boise	Y	Y	381-2490
St Joseph's RMC	Lewiston	Y	Y	799-5520

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Pertussis is on the rise in Idaho this Summer

Several health districts are reporting an increase in culture-confirmed pertussis this summer. This serves as a reminder that vaccine-preventable diseases continue to circulate in Idaho. Tests available to detect *Bordetella pertussis* include DFA, PCR, and culture. DFA has a low sensitivity and specificity making it unreliable and the PCR protocol, although more sensitive and specific, is not an FDA-approved test and must be validated at each laboratory that chooses to use it. With a clinically compatible illness, culture remains the gold-standard for diagnosis of pertussis. Should you suspect a case of pertussis, please report such instances to your district health department epidemiologist.

ROUTINE PHYSICIAN 24-HOUR DISEASE REPORTING LINE: 1-800-632-5927
EMERGENCY PHYSICIAN 24-HOUR REPORTING LINE: 1-800-632-8000

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